TETON NATIONAL FOREST

MOUNTAIN PINE BEETLE SUPPRESSION PLAN

FALL 1967 - SPRING 1968

Prepared By: D. Tejus Sprague Date 11/28/67
Project Leader

Recommended By: Ernest C. Hirsch Date 11/29/67
Forest Supervisor, By acting

Approved By: _____ Date _____
Assistant Regional Forester (TM)

I. HISTORY

This suppression project is planned for the control of the Mountain Pine Beetle (Dendroctonus monticalae) attacking lodgepole pine (Pinus contorta) stands on the Teton National Forest.

The Teton National Forest has recorded data indicating recurrent Mountain Pine Beetle infestations dating back to 1914 (see Table 1, Appendix). The first large suppression project on the Teton was undertaken in 1948, 1949, and 1950 and extended through the lodgepole stands of the Targhee National Forest and Grand Teton National Park. This project successfully reduced that outbreak to an endemic level.

In 1956 suppression work was initiated in lodgepole stands in the Hoback Basin and by 1958 outbreaks were occurring in the Ditch Creek and Antelope Mountain areas. Treating has continued on the forest since 1956 with varying degrees of success. No more treating was conducted in the Hoback Basin after 1963 and an all-out effort was directed at reducing the infestation in the area from Ditch Creek and Antelope Mountain to Pacific Creek and Pilgrim Mountain. In 1965, a complete treating job on both Grand Teton National Park and Teton National Forest apparently curbed the rampant build-up of the infestation. A total of 312,000 trees were treated on the Teton National Forest that year.

A decrease in numbers of trees treated as well as area treated has occurred since 1965 and the post treatment survey conducted during October 1967 indicates 33,000 trees on 41,000 acres. (See Survey report).

In 1965, a policy statement to guide the overall treating program on the Teton was developed and approved by the Regional Forester. This policy statement, "Policy for the Control of Current Mountain Pine Beetle Infestations on the Teton National Forest" has been the basis upon which all suppression since that time has been conducted. (See Appendix).

The standing spray treating method was the only method of control utilized until the early 1960's at which time logging as a means of control was initiated, as well as falling and sprinkling and falling and burning. In 1965, standing burn was attempted on a small scale. However, it did not prove feasible from the access standpoint.

II. PRESENT INFESTATION

The total area of infestation shown on the attached maps does not include the extent of infestation in the Teton Wilderness Area and Grand Teton National Park. There are 52,500 acres of

forest land within the current infestation in the north and middle zones as defined in the Policy Statement. Of this, only about 15,000 acres with approximately 18,000 infested trees, are planned for treatment in this plan. The Arizona Creek-Pilgrim Creek area consisting of 7,200 acres will not be treated because it lies between the Grand Teton National Park and the Teton Wilderness Area where no treatment is planned. The remaining 30,300 acres not planned for treatment are areas where the infestation has been successfully reduced to endemic levels.

III. PROPOSED CONTROL

The suppression objectives are stated on page four of the attached Policy Statement.

A. Logging

Logging is, and will continue to be, the most desirable method of control. Logging will again be conducted in the north zone within the infested area; however, the volume of infested timber removed will be considerably less as most sales, active and planned, are on the fringe areas and in areas where the infestation has been substantially reduced. This will be beneficial however, in that it will effect a reduction in the number of over-mature, highly susceptible trees.

District Rangers will be encouraged to prepare smaller ranger sales in "hotspot" areas within the current treating areas. If necessary these sales will be offered at less than base rates to make them desirable offerings.

All timber sales will be offered and administered within the guidelines set by the Policy Statement and the Teton Timber Management Plan.

The following is a resume of the F.Y. 1968 sales program to control or assist in controlling the infestation:

Volume infested timber to be cut:	69	MBF
Number infested trees to be cut:	550	
Volume uninfested timber to be cut:	6,795	MBF
Number uninfested trees to be cut:	54,360	

The above figures are from three sales lying on the fringe area of the infestation in the north zone.

The following are proposed sales and approximate dates they will be offered within the infestation:

Flagstaff Creek	1,500	MBF	June 1968
North Spread Creek	3,000	MBF	June 1968

B. Other Control

There are approximately 17,300 trees on 8,950 acres which will be treated by contract. The treating units are indicated on the attached maps. Rosie's Ridge and two units on the north side of the Hatchet area adjoining U.S. Highway 289 will be treated by the fall and burn method during the winter months. Hatchet units 6 and 7 and Spread Creek Unit 20 will be treated by the fall and sprinkle method during May and June.

There are several smaller isolated areas that will be treated by the fall and burn method by force account crews this fall prior to awarding contracts for the above mentioned winter work. These are areas where there are groups of five or more trees that are too small to logically set up as contract treating units. Approximately 570 trees on 880 acres will be treated in this manner.

The fall survey did indicate scattered groups of three or more infested trees in areas on the Hatchet, but did not show sufficient numbers of trees per acre to make treating desirable or feasible. In order to do a complete job of treating, these areas will be flown in June as the infested trees begin to fade and the groups of three or more trees will be plotted on aerial photographs. Then a force account crew will be sent into these groups to fall and sprinkle them. It is felt that this will effect a good "cleanup" in those areas not planned for full-scale treatment. This involves an area of about 5,000 acres and 300 infested trees.

No other methods of treatment will be used other than as previously mentioned under logging.

IV. ORGANIZATION

Table 11 of the Appendix is an organization chart indicating positions and names to the extent known at this time. The project leader, under the direction of the timber staff officer will directly supervise the entire project.

Project personnel will consist of experienced people from the local labor force and temporary district personnel for which the districts have no use during the winter and early spring months. These people are already hired or will be hired by November 15. All of these men have a minimum of two years experience on insect control projects.

V. FINANCIAL PLAN

A.	Total allocation to date		$ 178,154.00
B.	Expenditures to date		58,357.90
	1. To complete 1967 project	$ 22,453.06	
	2. Summer maintenance & F.O.R. equipment rental & salaries through Nov. 15, 1967	9,811.82	
	3. Survey	13,006.42	
	4. Overhead salaries	2,118.60	
	5. Ranger District RDMA	1,736.00	
	6. S.O. general expense	9,232.00	
C.	Funds available		119,796.10
D.	Estimated total project cost		82,917.00

1. Financial Plan for winter fall and burn project (Contract):

Rosie's Ridge	3870 acres	11,400 trees
Hatchet	1436	1,500
	5306	12,900

a.	Contract @ 3.00/tree	38,700.00
b.	Salaries @ .60/tree	7,740.00
c.	Transportation @ .30/tree	3,870.00
d.	Supplies & Misc. @ .10/tree	1,290.00
	Subtotal	$ 51,600.00
	S.O. general expense	6,192.00
	Total	$ 57,792.00

2. Financial plan for winter fall and burn project (Force account):

Rosie's Ridge	100 acres	170 trees
Hatchet	780	400
	880	570

a.	Salaries @ 6.00/tree	$ 3,420.00
b.	Transportation @ .60/tree	342.00
c.	Supplies & misc. @ .25/tree	143.00
	Subtotal	$ 3,905.00
	S.O. general expense	470.00
	Total	$ 4,375.00

3. Financial Plan for spring fall and sprinkle project (Contract):

Hatchet	2,007 acres	2,000 trees
Spread Creek	1,637	2,200
	3,644	4,400

a. Contract @ 2.85/tree	$ 12,540.00
b. Salaries @ .50/tree	2,200.00
c. Transportation @ .15/tree	660.00
d. EDB & oil @ .50/tree	2,200.00
e. Supplies & misc. @ .10/tree	440.00
Subtotal	$ 18,040.00
S.O. general expense	2,165.00
Total	$ 20,205.00

4. Financial plan for spring fall & sprinkle project(force account):

Hatchet (2) 5,000 acres 300 trees

a. Salaries @ 3.50/tree	$ 1,050.00
b. Transportation @ .75/tree	225.00
c. EDB & oil @ .50/tree	150.00
d. Supplies & misc. @ .20/tree	60.00
Subtotal	$ 1,485.00
S.O. general expense	178.00
Total	$ 1,663.00
Grand Total	$82,917.00

(1) EDB & oil on hand to do job

(2) See paragraph 3, Sec. 111 b

The following are accounting code designations that will be used in the project cost accounting: 804-044-01-30-0-0000-_-_

1st Digit

3 - Contract treating
4 - Force account treating
5 - Cooperative work and agreements
6 - Contract logging
7 - Project road construction and maintenance
8 - Camp costs
9 - Direct project overhead

2nd and 3rd Digits

71 - Supplies and miscellaneous
72 - EDB and oil
74 - Equipment
75 - Salaries
76 - Travel and per diem
77 - Equipment rental
78 - Services

All cost keeping records will be handled by the Budget and Finance Administrative Assistant on the forest and will be open to inspection by the Project Leader at all times.

VI. COLLABORATION AND WORKING AGREEMENTS

The Teton National Forest is presently working closely with M. Laurence Rockefeller concerning an insect epidemic on his JY Ranch located near Moose, Wyoming. Mr Rockefeller has decided to treat on a limited basis, around the ranch improvements and along roads and trails. The Forest Supervisor has offered him the necessary technical leadership and assistance for performing this treating job.

No Cooperative Agreements are anticipated with Grand Teton National Park in view of their decision to do no more treating except in "Green-Belt" areas.

VII. SAFETY AND TRAINING

The field foreman will be assigned the task of safety officer. Included in his daily assignments will be the job of checking for compliance with the forest and Project safety plans and with the Forest Service Health and Safety Code. He will conduct weekly safety meetings and turn into the Project Leader the safety meeting minutes. He will advise the Project Leader of any safety violations and offer suggestions for improvement of the overall safety program. (See Appendix for Safety Plan).

A formal training session will be conducted at the beginning of the winter and spring projects by the Project Leader. Follow-up training and checking will be conducted by the Project Leader, a field foreman and the Project Inspectors.

VIII. EQUIPMENT, SUPPLIES, AND SERVICES

All map and aerial photograph needs are available on the forest. It is anticipated that the new resource photography will be available by January. At this time, the project will purchase that portion of the photography to cover the areas presently being treated.

Insecticide

On hand: 6,900 gallons 6# EDB Concentrate
2,950 gallonss3# EDB Concentrate
12,000 gallons oil mixed chemical
11,765 gallons #2 burner oil

Needed: 16,450 gallons oil mixed chemical

Transportation:

The following vehicles are available on the forest for the project:

1. I&DC vehicles

2 - 4x4 Carryalls
1 - 4x2 Carryall
1 - 4x4 - 3/4 ton Pickup
1 - 4x2 - 1/2 ton Pickup

2. Forest vehicles available

1 - 4x2 1-ton stake
1 - 4x2 - 1/2 ton Pickup
1 - D-7 tractor-crawler

The following vehicle needs are not available on the forest:

6 - Over-snow vehicles (2-man)
1 - Personnel carrier (12-man)

Arrangements have been made with the Targhee Insect Control Project Leader to obtain the 12-man personnel carrier in December and return it in March or April. One over-snow vehicle is to be assigned to the project from the equipment section to replace the one sold this year. The other five will be rented from local sources on equipment agreements.

All miscellaneous supplies needed to carry out this project will be obtained through normal Forest Service purchasing procedures.

IX. TREATING STANDARDS

A. Stringlining and Spotting

1. The contractor will divide each unit into lanes of no more than two chains in width by means of stringlines.

Lanes of one chain in width are preferred. Stringlines will be six feet above the ground and will be numbered consecutively throughout the treating unit.

2. All infested trees within each stringline will be spotted and designated by the contractor. This will be done by stapling a two part colored tag to one side of the tree and blazing the opposite side of the tree. Each tag will be marked with the tree number, year and month. Each blaze will be marked with the tree number. Infested trees in adjacent lanes will be designated with different colored tags.

B. Treating (Fall and Sprinkle)

1. All infested trees felled for treatment will be limbed to a 4" top diameter and the tops lopped off at this point prior to treatment. All of the infested portion below the 4" top diameter will then be treated by completely sprinkling with the chemical mixture of EDB and oil.

2. No cut trees or tops will be left in view of main traveled highways or roads.

3. Stump heights will not exceed 12 inches.

4. The portion of the spotting tag marked "treated" will be removed when the tree is treated and turned in to the Project Inspector.

C. Treating (Fall and Burn)

1. All infested trees felled for treatment will be limbed to a 4" top diameter and the tops lopped off at this point. All of the infested portion below the 4" top diameter will be completely and thoroughly burned until the bark is completely consumed.

2. In the event neighboring trees are scorched in the burning process, the contractor will, without compensation, fell and burn them in accordance with the above specifications.

3. No burning will be done within 100 feet of main traveled highways or roads.

4. Stump heights will not exceed 12 inches.

5. The portion of the spotting tag marked "treated" will be removed from each tree just prior to burning and will be turned in to the Project Inspector. The tree number will be written in grease pencil on the stump.

D. Treating (Force Account)

All force account treating will follow the above outlined specifications.

E. Quality Control

1. Contract Treating

All trees treated will be checked by Forest Service checkers for compliance with contract specifications. The Project Inspector will spot check each of his checkers a minimum of once per week and document each check. The field foreman will check each Project Inspector and his checkers and document to the Project Leader a minimum of once per week.

2. Force Account Treating

The quality of force account work will be checked and documented twice a week by the field foreman.

X. MULTIPLE USE COORDINATION

The Project Multiple Use Survey Report approved May 18, 1965 by the Regional Forester is currently being reviewed by Supervisor's Staff and District Rangers. All work on this project will be carried out in strict accordance with the Multiple Use Survey Report as approved and revised. A copy of the revised plan will be submitted as a supplement to this plan as soon as the review and revision are complete.

XI. INFORMATION AND EDUCATION

The following items relative to the Insect Control Project are outlined in the Teton National Forest Five Year I&E Action Plan:

A. Inform the general public on the insect problem. Forest Supervisor and Rangers.

B. Prepare news releases on the Insect Control Project. 11/9/67, Sprague; 2/1/68. Sprague; 7/27/68, Sprague.

C. Make personal contacts with the Wyoming Game and Fish Commission and Grand Teton National Park. Safran and Edwards.

D. Show-me trip for the Advisory Council. Safran and Hirsch.

E. Show-me trip for the County Commissioners. Safran and Hirsch.

XII. RECORDS AND REPORTS

A. Records

1. Cost keeping journal

2. Progress map showing daily progress:

   (a) Scale: 2" = 1 mile
   (b) Hachure marks indicate stringlines and shading indicates treating complete.

3. Daily Progress Record by treating unit. Prepared by Project Inspectors.

B. Reports

1. Weekly Progress Report - information taken from Daily Progress Record and submitted to R.O. on Form R4-5200-6 each Monday by Project Leader.

2. Suppression Report - prepared within 30 days after completion of project by Project Leader.

3. Report of Inventory - prepared by the Project Warehouseman and submitted to the Project Leader for inclusion in the Suppression Report.

XIII. ROADS

No road construction or road maintenance financing is planned from Insect Control funds this fiscal year. Key roads will be opened in May to allow them to dry out for access to the units to be treated in the spring.

During the winter project, a D-7 tractor belonging to the forest will be kept on standby to plow the road from Four Mile Meadows to Turpin Meadow after heavy snowstorms.

A P P E N D I X

TABLE I

TETON NATIONAL FOREST
MOUNTAIN PINE BEETLE
INFESTATION HISTORY
1914-1967

YEAR	CONTROL AREA	METHOD OF TREATMENT	TREES ESTIMATED	TREES TREATED	COST
1914		Infestation reported			
1915		No report			
1924		No report			
1927		No report			
1928	SW corner of forest		275		
1929			3,000		
1930		No report			
1931	Mosquito Creek		1,496	4,762	
1932	Mosquito Creek		230		
1933	Gravel Creek Fire Mosquito Creek		9,800		
1934			15,000		
1935		Little			
1936		Attention paid to heavy losses			
1939		Increase in infestation in North part of forest			
1940		Fewer attacks			
1941		Little change			
1942		No report			

YEAR	CONTROL AREA	METHOD OF TREATMENT	TREES ESTIMATED	TREES TREATED	COST
1943		No report			
1944		No report			
1945	Mosquito Creek Fall-Pritchard Creek		12,000		
1946	Forest and Grand Teton National Park		30,000	6,000	
1948		Ortho Oil	12,000	108,000	$226,194 (for 48,455 trees)
1949	Ditch Creek, Antelope, Horse Creek, Porcupine Creek & Mosquito Creek		8,271	11,664	77,881
1950	Lost Creek	Fall and burn	1,833	6,160	81,500
1951			900		
1952					
1953					
1954					
1955			3,000		
1956	Sledrunner Creek, N. Fisherman Creek, Dell Creek, & Sandrock Creek	Fall & Spray Spray Standing	180	3,483	19,700
1957	Sledrunner Creek, N. Fisherman Creek, Dell Creek, and Sandrock Creek	Spraying	870	1,477	16,790

YEAR	CONTROL AREA	METHOD OF TREATMENT	TREES ESTIMATED	TREES TREATED	COST
1958	Antelope, Ditch Creek, Dell Creek & Sandrock Cr.	Chemical Spraying	1,000	1,295	$12,550
1959	Antelope, Ditch Creek, Dell Creek & Sandrock Cr.	Chemical Spraying	2,050	1,517	12,225
1960	Hatchet, Spread Creek, Antelope, Ditch Creek, Granite Creek, Sledrunner Creek, Jack Creek, Fisherman Creek, Shoal Creek, & Dell Creek	Chemical Spraying	15,079	6,907	38,799
1961	Hatchet, Spread Creek, Antelope, Ditch Creek, Granite Creek, Sledrunner Creek, Jack Creek, Fisherman Creek, Shoal Creek, & Dell Creek	Fall & Burn, EDB	150,000	18,493	103,275
1962	Rosie's Ridge, Hatchet, Spread Creek, Antelope & Ditch Creek	EDB	120,000	50,017	204,034
1963	Hatchet, Spread Creek, Antelope, Ditch Creek, Jack Creek, Shoal Creek, Dell Creek, Hoback River	EDB, Logging	170,000	104,636	401,300
1964	Pilgrim Mt., Pacific-Lava Creek, Hatchet, Spread Creek, Antelope, Ditch Creek	EDB, Logging Fall & Burn	180,000	154,365	400,588
1965	Pilgrim Mt., Rosie's Ridge, Hatchet, Spread Creek, Antelope Mt., Ditch Creek, Cache Creek	EDB, Logging Fall & Burn Standing Burn Fall & Sprinkle	425,000*	312,456	804,783

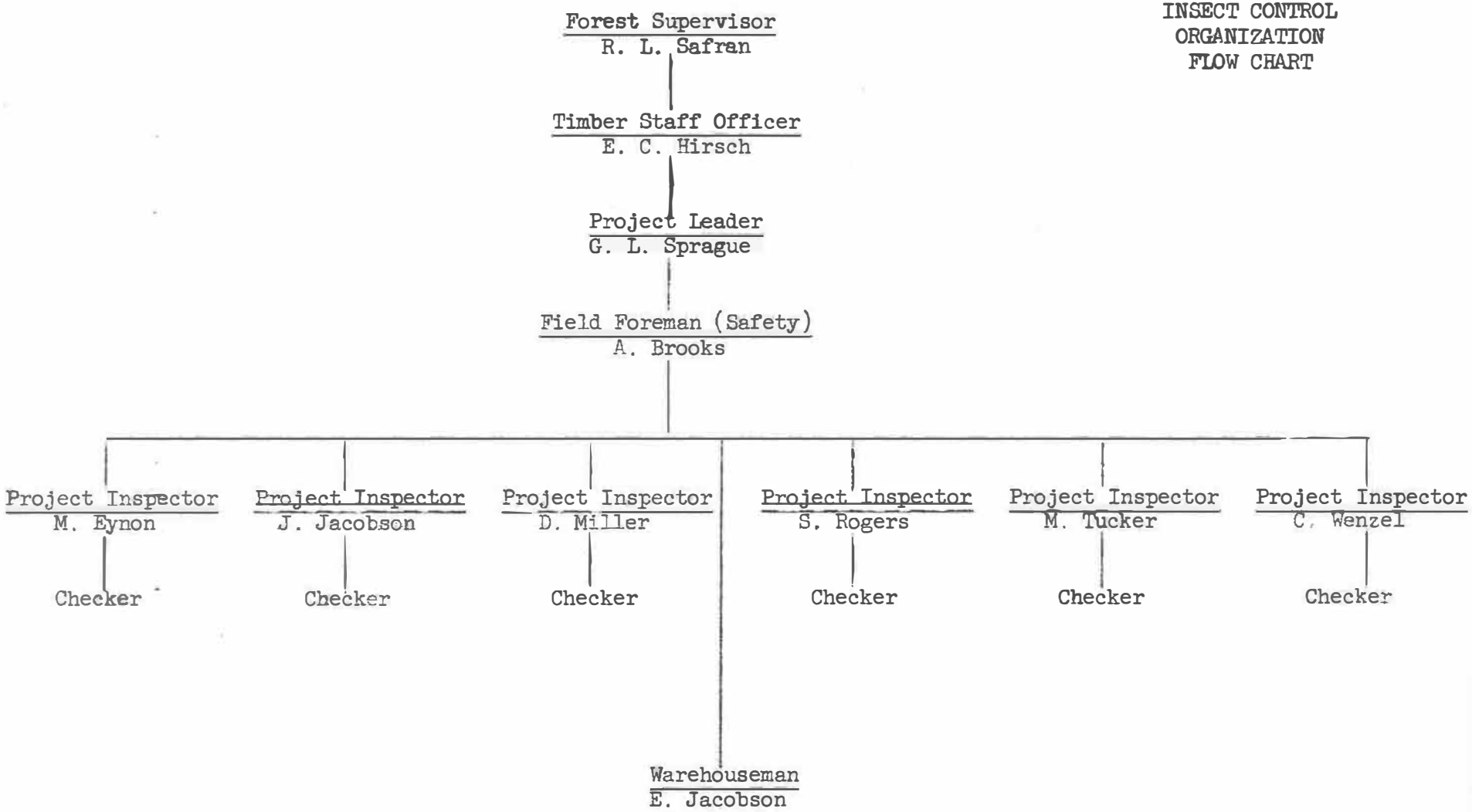
YEAR	CONTROL AREA	METHOD OF TREATMENT	TREES ESTIMATED	TREES TREATED	COST
1966	Pilgrim Creek-Arizona Creek, Rosie's Ridge, Hatchet, Spread Creek, Ditch Creek, Turpin Creek, Lower Slide Lake	EDB, Logging Fall & Burn Standing Burn Fall & Sprinkle	175,183 *	208,230	$807,565
1967	Pilgrim Creek-Arizona Creek Rosie's Ridge, Hatchet, Spread Creek, Turpin Creek, Lower Slide Lake, Wilson	EDB, Logging Fall & Burn Fall & Sprinkle	88,103*	98,278	440,183

*Excludes Teton Wilderness Area

TETON INSECT CONTROL WORK
5 YEAR SUPPRESSION ACCOMPLISHMENTS

AREA	1963		1964		1965		1966		1967	
	ACRES	TREES	ACRES	TREES	ACRES	TREES	ACRES	TREES	ACRES	TREES
Rosie's Ridge					8,700	74,731	6,708	42,300	6,700	22,558
Hatchet	2,500	21,998	2,301	8,950	8,065	82,612	10,975	46,448	10,975	27,154
Spread Creek	610	3,786	3,815	22,810	8,955	28,329	11,130	11,580	750	620
Antelope, Lost Creek, Brush Creek	1,860	32,400	2,780	32,010	3,112	22,879	4,202	5,924	200	76
Ditch Creek	800	10,224	2,100	9,799	9,210	26,370	8,895	5,266		
Pilgrim Mountain			241	4,444	3,000	77,535	6,838	89,822	7,200	44,477
Pacific-Lava Creek			4,331	74,932						
Cache Creek					100	412				
Lower Slide Lake							245	642	245	332
Turpin Creek							2,175	6,248	2,175	2,942
Fall Creek			189	1,420						
Wilson									25	119
Jack Creek	895	7,151								
Shoal Creek	820	6,206								
Dell Creek	1,850	20,571								
Hoback River	550	2,300								
TOTALS	9,885	104,636	15,568	154,365	41,142	312,456	51,168	208,230	28,275	98,278

TABLE II
INSECT CONTROL
ORGANIZATION
FLOW CHART



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POLICY FOR THE CONTROL OF CURRENT MOUNTAIN PINE BEETLE INFESTATIONS ON THE TETON NATIONAL FOREST

Approved by:

R. L. Salman
Forest Supervisor, Teton N. F.

5/13/65
Date

Joel L. Dayberson
Assistant Regional Forester, TM

5-17-65
Date

Floyd Iverson
Regional Forester

5-23-65
Date

POLICY FOR THE CONTROL OF CURRENT MOUNTAIN PINE BEETLE INFESTATIONS ON THE TETON NATIONAL FOREST

Background Information

Serious mountain pine beetle infestations currently exist in lodgepole pine stands on the Buffalo and Hoback Ranger Districts on the Teton National Forest, with lesser amounts of infestation on the Gros Ventre and Jackson Ranger Districts.

Infestations in the Grand Teton National Park and on private and Bureau of Land Management lands adjoin the National Forest infestations on the Buffalo and Hoback Ranger Districts.

The infestation on the south end of the Hoback River Drainage dates back to 1954. The northern infestation on the Buffalo and Gros Ventre Ranger Districts is newer by a few years. Neither of the infestations, however, really started to move until 1960 when the first of the present series of extreme buildup ratios was noted. Entomologically, there are no indications that either infestation is subsiding.

Records for fifty years show that minor bark beetle infestations have been common. In the past three decades there has been an increasing tendency for infestations to develop into major epidemics as the timber stands reach or exceed the age of maturity.

General Considerations

This is a statement of short-term policy for treatment of the current mountain pine beetle infestations on and adjacent to the Teton National Forest. While it provides general guideposts for treatment of similar infestations elsewhere in the Region, each one would need separate policy, depending upon the local situation.

Timber sales, road construction, and insect control proposals will be preceded by multiple use surveys in accord with instructions. This policy statement is based upon the assumption that control is necessary and economically justified. There does not appear to be any other alternative than to seek, by the most effective means, control of the current infestation.

Division into Zones

The Teton area divides logically into three infestation zones: (1) North Zone; the area from the Gros Ventre River northward to the south boundary of Yellowstone National Park; (2) Middle Zone; the area south of the Gros Ventre River excluding the Hoback River Drainage; and (3) South Zone; the Hoback River Drainage. While not wholly independent of the others, each of the zones has certain physical and economic characteristics, as well as management considerations, which support the division.

Discussion - North Zone

The North Zone contains some of the most productive lodgepole pine sites on the Teton National Forest. Most of the timber in this zone is within reach of and is being sought by established mills in the Dubois area and to some degree by mills at Alpine and Afton. Recent sales activity in this area was started in 1962. Initially, Forest officers were apprehensive of an adverse public reaction to a control-cutting operation in the area. Since then logging practices have been modified and logging is becoming more generally accepted locally as an insect control procedure. Recent sales activity has been stepped up in this area, additional short-term sales are being prepared, and detailer assistance has been arranged to accelerate the program.

The infestation in the North Zone now extends northward from the southern boundary of the Teton Wilderness Area, a distance of five miles or more. A conservative estimate of the number of infested trees within the Wilderness would be well over 200,000. Immediately adjacent to the Wilderness Area, in Pacific and Lava Creeks, 120,000 trees were found by the survey in 1964. Fifty percent or more of the susceptible stands in lower Pacific and Lava Creeks are now dead or infested. Because of the undesirability of treating in the Wilderness Area, the first policy need is to establish a northern control line.

The progression of this infestation has been northeastward with the prevailing wind. While there are no major barriers ahead to keep the infestation out of Yellowstone National Park, the combination of elevational differences, type changes, and reduction of pressure from behind, by treating and logging in infested areas, may be of sufficient consequence to slow down the epidemic and allow natural factors to eventually stop the northward spread.

The suggested northern control boundary follows the main Buffalo River from the point of its emergence from the Wilderness Area, two miles east of Turpin Meadow, to the point where the highway crosses the Buffalo River some ten miles west; thence west along the highway to Lava Creek; thence northwesterly across Pacific Creek about one-half mile outside the Forest boundary to the eastern edge of Two Ocean Lake; thence northwesterly again from the west edge of Two Ocean Lake on a direct line to Pilgrim Mountain; thence north on the Wilderness Area boundary to the south boundary of Yellowstone National Park; thence west to the intersection of the Targhee National Forest boundary with the Yellowstone National Park boundary.

Grand Teton National Park personnel favor doing as complete a job as is practical and have indicated their willingness and readiness to treat to the suggested control line.

Policy - North Zone

Timber Sales

(1) Within the National Forest areas, timber sales for control and removal of insect-susceptible and insect-infested trees will be accelerated to gain the most from this means of control within the capacities of existing industry within reach of the infestation. Sales will be concentrated in the area immediately south of the Buffalo River. Should the infestation be brought under control in that area but continue its northward expansion, sales activity will be directed northward within the treating zone. (2) Sales will be made for as short a period as possible to gain the full advantage of control, but in no case should exceed two years. (3) Sales activity in noninfested timber will be curtailed for the duration of the infestation. (4) Sales will be made in the Travel or Water Influence Zones in conformance with the subregion guide and District multiple use plans.

Roads

(1) Give prompt consideration to immediate road needs in the infested area or in areas which have a high potential for infestation. The Spread Creek Drainage is urgently in need of access. (2) Road construction will be done in an orderly manner with adequate advance planning to obtain full coordination and public acceptance. The most urgent need is for the Flagstaff Creek road which will be programmed and constructed as soon as possible.

Treating

(1) All the Teton National Forest and Grand Teton National Park areas of infestation between the Gros Ventre River and the south end of the park, northward to the above-mentioned control line, will be conscientiously and thoroughly treated until the infestation subsides or is controlled, regardless of sales activity within the control area. An exception to this rule would be no treatment of trees that will be harvested in time by logging to contribute to control. (2) The Region should aggressively seek control funds to treat all infested areas within the northern zone of infestation as completely, thoroughly, and proficiently as possible.

Cleanup

Insect control planning and financing must include funds for cleanup of timber sales in infested areas to acceptable standards if collected slash disposal and erosion control funds are inadequate.

Regeneration

Natural regeneration will be depended upon for reforestation of the cutover timber sale areas, at least for the present. Should the need for artificial regeneration become apparent at a later date, the Region should be prepared to give consideration to Teton needs within the P&M financed planting program.

Size and location of cutting blocks should be so planned to favor natural regeneration. Leave strips will remain for a minimum of two years to provide a seed source. Treatment may be necessary in the intervening strips. Larger than normal cutting blocks may be necessary in seriously infested stands, subject to such limitations as are necessary in compliance with the subregion guides.

Summary

In summary, efforts for the northern zone of infestation should be directed at halting the spread to the east and north, outside the Wilderness Area, and toward reducing the threat in the remainder of the zone, utilizing a combination of timber sales and treating to the fullest extent possible.

Discussion - Middle Zone

The Middle Zone of infestation consists of all of the Jackson Ranger District and the Gros Ventre Ranger District south of the Gros Ventre River. It was within this area that most of the 1947-1950 infestation was contained. The zone is now only lightly infested in a few scattered pockets, where treatment will be required to prevent increase and spread.

The lodgepole pine stands in the Middle Zone are good quality merchantable timber, for the most part operable or so located that they could be made operable without expensive road construction projects. The timber in this zone is too far from Dubois to be attractive to the operator there at this time, but it would probably be of interest to purchasers in Star Valley.

Policy - Middle Zone

(1) The existing pockets of infestation in Cache Creek and Game Creek should be treated chemically or handled through timber sales to reduce or eliminate the chance of enlargement and spread. (2) After the present infestation is controlled, the timber in this zone will remain highly susceptible to insect attack. Therefore, as soon as the need for accelerated sales activity in the North Zone is over, the proportionate allowable cut of the Middle Zone should be fully marketed. By directing and encouraging sales in this zone up to the allowable cut, the overmature lodgepole pine timber in the zone can be harvested at a rate sufficient to maintain endemic conditions. (3) An access road contruction program should precede or accompany the sales program. (Even if we can so finance, we cannot go beyond prudency in requiring road construction by purchaser.) The timber should not be expected to carry the full cost of the permanent road system.

Discussion - South Zone

The South Zone, consisting of the Hoback River Drainage, has carried infestation longer and more consistently than the other zones. Some

treating was done intermittently in this zone from 1956 through 1962. The infested stands are not as good quality commercial timber as found in other areas; other values also are generally lower in this zone; therefore, control proposals have consistently been rated lower priority than other regional projects. Any consideration of a control proposal for this area is further complicated by the fact that Bureau of Land Management timber and private timber in the adjoining Beaver Creek Drainage, being heavily infested, are a prime source of reinfestation for the upper Hoback River areas. No control has been done here.

The chances for commercial sales in the infested areas appear better than they were although the stands are not as desirable as are other stands on the Forest. The infested parts of the Teton National Forest within this zone appear to contribute little or no threat to other Teton National Forest stands. They do pose a threat, however, to the adjoining stands on the Bridger National Forest, and the Bureau of Land Management-private land infestation (called the Kismet Peak infestation) in Beaver Creek. It is a threat to Bridger National Forest timber lying to the south and west of the Kismet Peak infestation.

Policy - South Zone

The policy for the upper Hoback River infestations is to let the insects run their natural course unless the need to protect specific areas on the Teton National Forest or adjacent stands (Bureau of Land Management, private, and Bridger National Forest) becomes a factor of sufficient bearing to necessitate a change in this policy, or other unforeseen occurrence dictates a change.

SAFETY PLAN
INSECT CONTROL PROJECT
TETON NATIONAL FOREST

I. Introduction

This plan is designed to supplement the Forest Plan and become a positive working tool in the supervision, training, and inspection of the overall Insect Control Safety Program. This plan is intended to promote, in all employees on the Insect Control Project, the continuing principle of safety consciousness.

II. Objectives

A. No fatalities!
B. '0' frequency in disabling injuries
C. '150' severity in lost time
D. '0' frequency in reportable vehicle accidents

III. Responsibility

Direct responsibility and leadership for the safety program of the Insect Control Project lies in the hands of the Project Supervisor. However, it will be the responsibility of each and every employee assigned to the project to:

1. Promptly report within 24 hours all injuries so the proper forms can be executed to document their occurrence.
2. Develop safe working habits and attitudes, and
3. Be familiar with the Teton National Forest and the Teton Insect Control Project Safety Plans.

The Project Safety Officer will inspect and investigate under the direction of the Project Supervisor.

IV. Safety Meetings

A formal safety meeting will be conducted each Monday morning for all employees assigned to the project. Minutes will be taken and submitted to the Project Supervisor for each meeting.

References for these safety meetings will be:

1. Forest Service Health and Safety Code
2. First Aid Guide for USFA Employees
3. Driver-Operator Guide
4. Periodic publications relating safety as applies to Insect Control Project

V. Inspections

All project work inspections made by the Project Leader or his staff will give high priority to safety considerations.

Each employee will be expected to take the initiative to inspect his particular job and tools for safety hazards. Action will be taken immediately to replace unsafe tools and correct hazardous conditions.

VI. Motor Vehicle Safety

1. Government vehicles will not be driven by anyone not possessing a Government operator's license.
2. Safety belts will be used at all times.
3. Unsafe conditions will be corrected immediately.
4. Drivers will become aware of and follow good defensive driving techniques.
5. All state and local driving rules and regulations will be followed by all personnel driving Government vehicles or driving private vehicles on Government business.
6. Men and tools or supplies will not be hauled together unless the tools or supplies are securely fastened.

VII. Building Safety

1. Fire extinguishers will be inspected annually and serviced as needed.
2. Flammable materials will be kept in buildings constructed for this purpose.

VIII. General

A. Insecticide

1. All personnel assigned to the chemical mixing plant will be thoroughly trained in the prevention of and first aid for insecticide burns.
2. All mixing will be done in a designated location.

B. Crews

1. Camps, living quarters, and work areas on the Forest, whether Forest Service or contractors, shall be maintained in a clean and orderly manner. Sanitation will be enforced regarding water supply, cooking, sleeping, garbage disposal, and latrines.
2. All employees will be attired in proper clothing, including hard hats, as required in the Safety Code.
3. A large first aid kit will be in each crew vehicle.
4. All tools will be properly shielded when not in use.

Safety will be foremost in our minds at all times. A safe unit is a productive unit.

PREPARED BY: _____ DATE: _____
Forester

APPROVED BY: _____ DATE: _____
Forest Supervisor

Addendum No. 1
Safety Plan
Insect Control Project
Teton National Forest

Fire Plan for the Blackrock Chemical Dock

This plan is to provide for warning, evacuation, and fire control activities at the Blackrock Chemical Dock and camp area.

Warning:

1. There is no bell or siren system for fire warning, so it will be the responsibility of the person first locating a fire to verbally sound the alarm so that everyone can hear him.

2. The Blackrock District Ranger or one of his staff will be notified immediately.

3. The Moran Fire Station will be called immediately by the Warehouseman.

Evacuation:

1. When the fire alarm is sounded, everyone will leave the compound as quickly as possible by the nearest exit. The nearest exits will be as follows:

   Dock - out the front gate
   Tank area - out the nearest side gate
   Warehouse - out the back gate

2. The Warehouseman will be responsible for turning off the main electrical power switch after he has exited the back gate.

3. It is important to leave the area to a distance of at least 300 yards because of the fumes from the chemical.

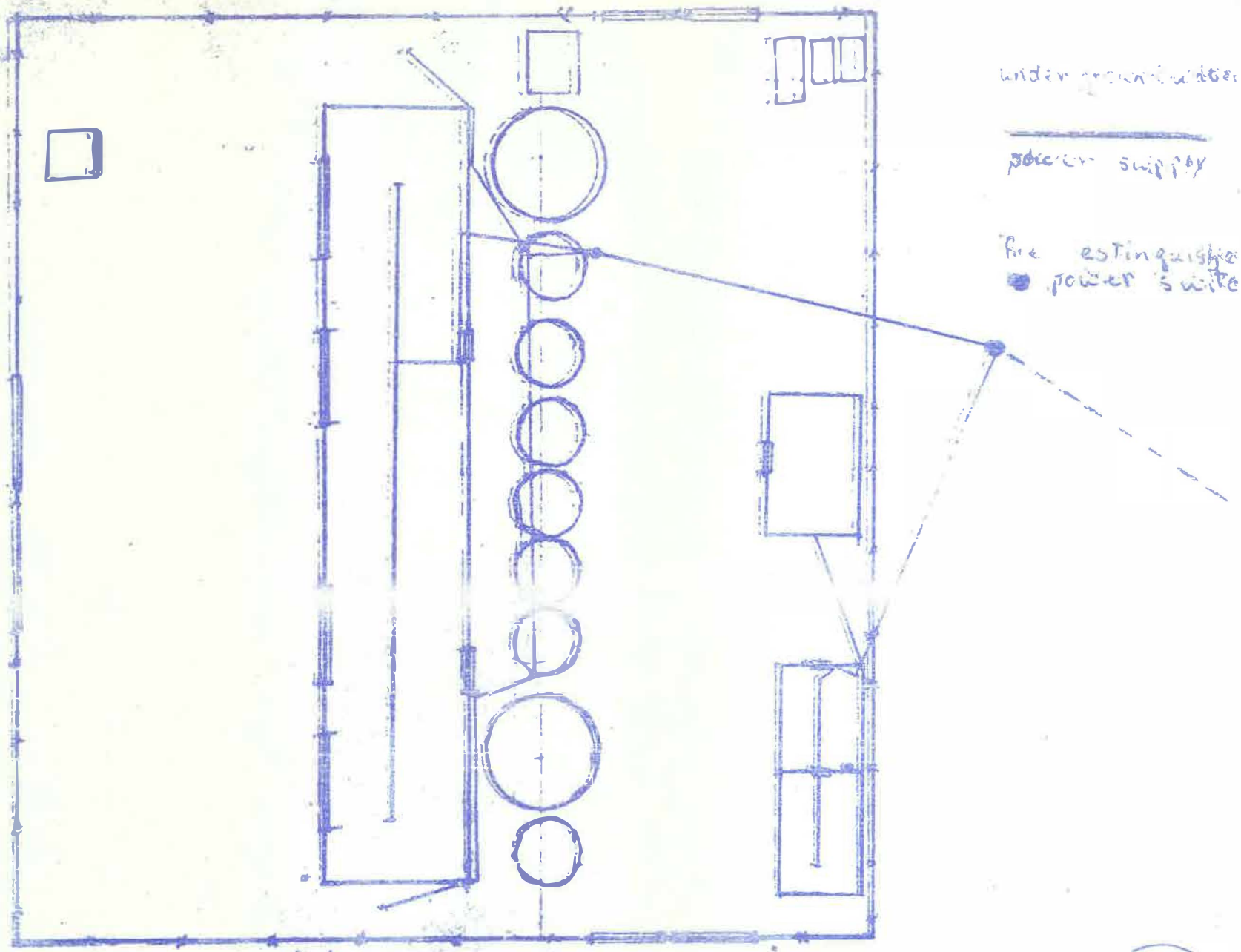
Fire Control:

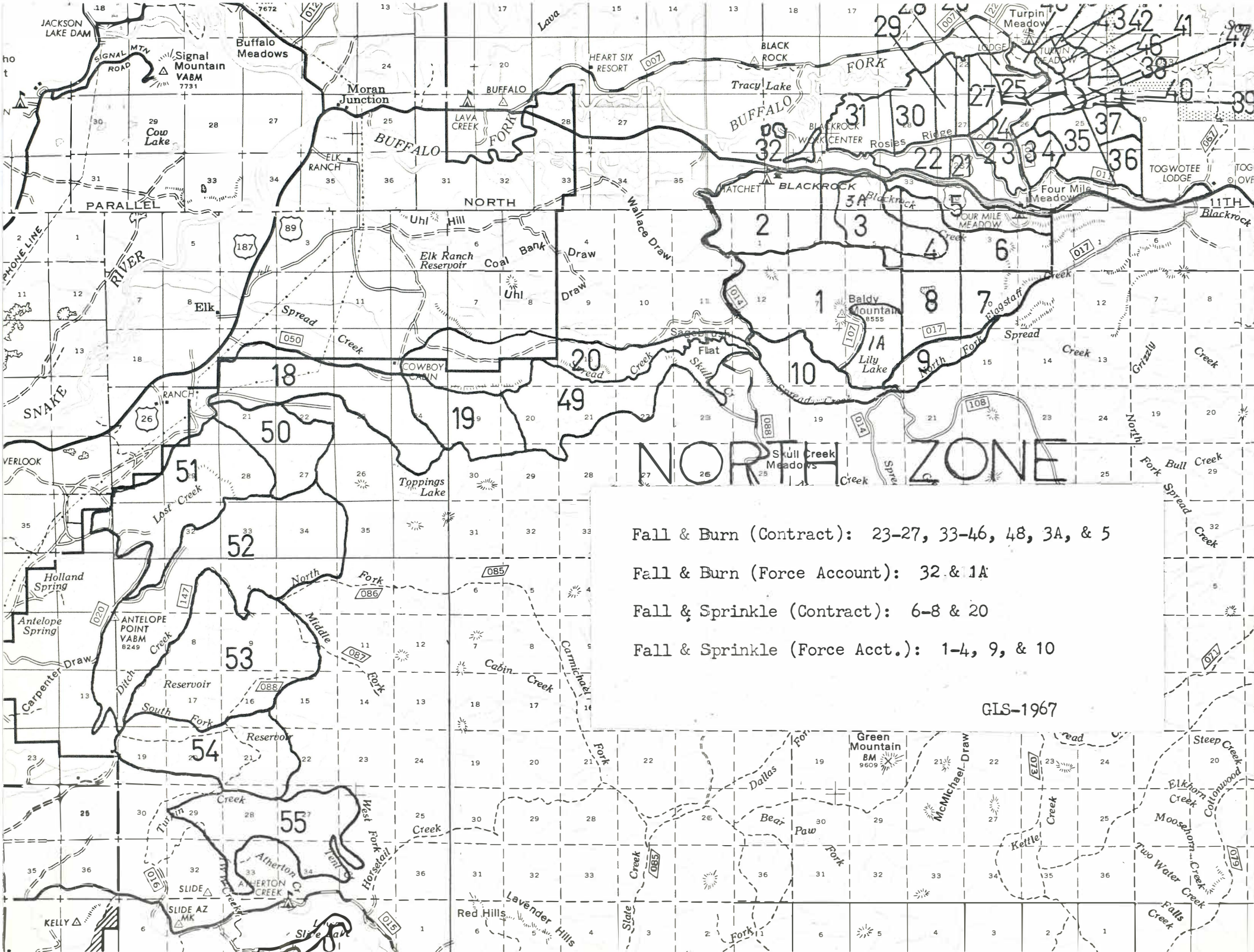
1. After turning in a fire alarm, attempt to extinguish the fire with the nearest fire extinguisher.

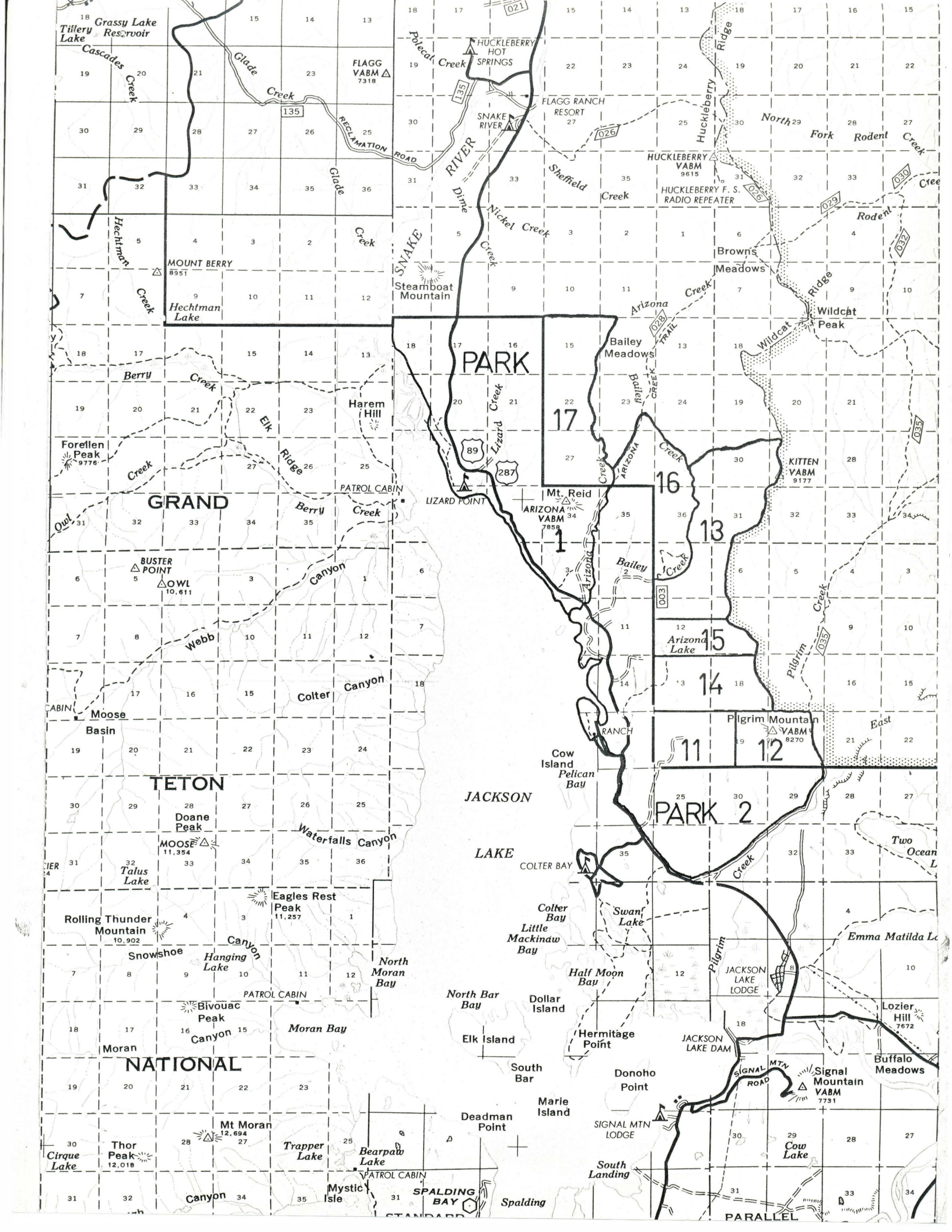
2. If a fire starts on the Dock, all available personnel should assemble at the two large fire extinguishers at either end of the Dock and immediately put them into action.

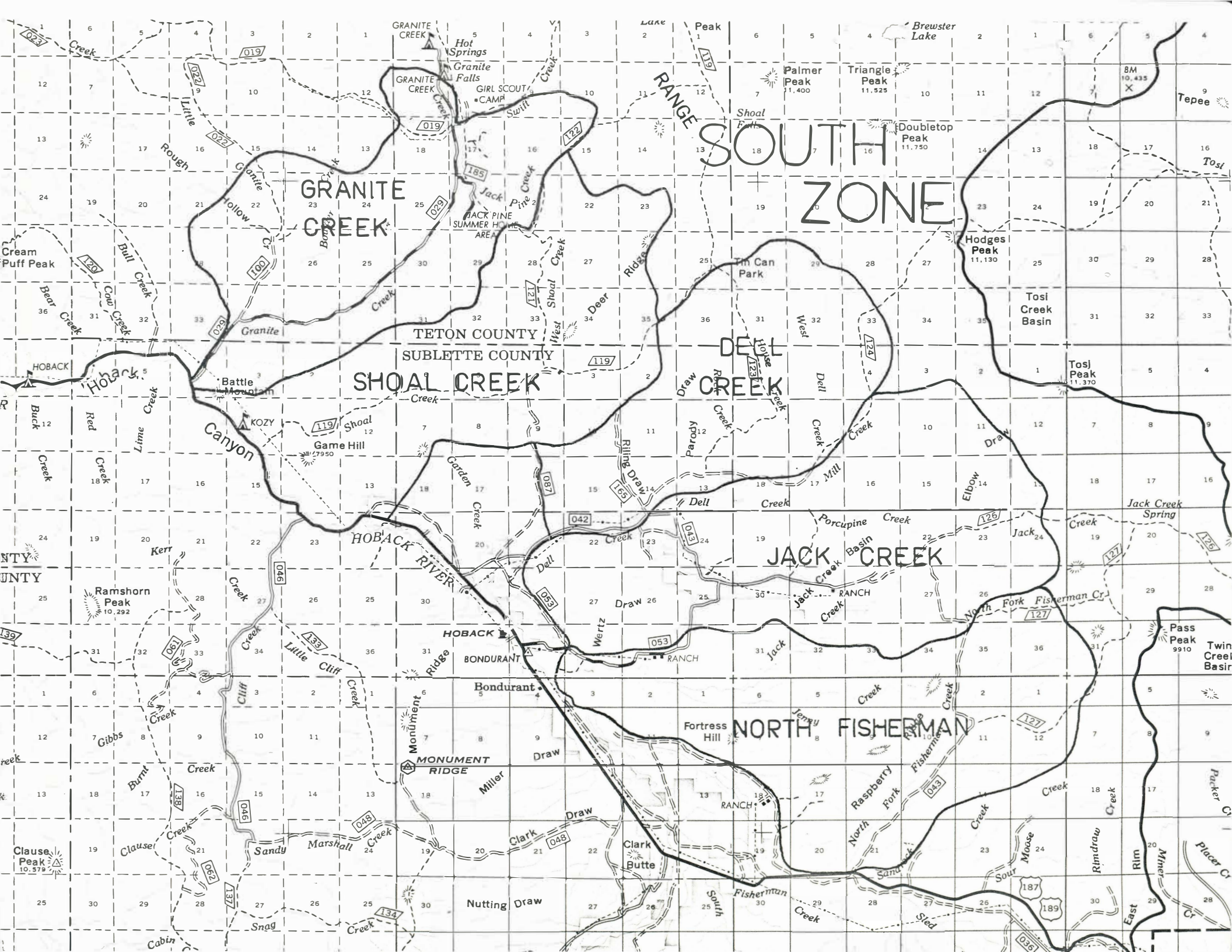
Fire Drills:

At least one fire drill will be held each year. Also, one safety meeting at the beginning of the season will be devoted to acquainting the dock crew with the use of all extinguishers available.


under ground water
power supply
fire estinguisher
power switch


NORTH ZONE
Fall & Burn (Contract): 23-27, 33-46, 48, 3A, & 5
Fall & Burn (Force Account): 32 & 1A
Fall & Sprinkle (Contract): 6-8 & 20
Fall & Sprinkle (Force Acct.): 1-4, 9, & 10
GLS-1967
JACKSON LAKE DAM
Signal Mountain VABM 7731
Buffalo Meadows
Moran Junction
Cow Lake
BUFFALO FORK
LAVA CREEK
HEART SIX RESORT
BLACK ROCK
Tracy Lake
Turpin Meadow
LODGE
Rosies Ridge
BLACKROCK WORK CENTER
HATCHET
BLACKROCK
Four Mile Meadow
FOUR MILE MEADOW
TOGWOTEE LODGE
ELK RANCH
PARALLEL NORTH
Uhl Hill
Wallace Draw
Elk Ranch Reservoir
Coal Bank Draw
Uhl Draw
Elk
Spread Creek
Baldy Mountain 8555
Sagebrush Flat
Lily Lake
Blackrock Creek
Flagstaff Creek
North Fork Spread Creek
Grizzly Creek
COWBOY CABIN
RANCH
Skull Creek Meadows
Toppings Lake
Lost Creek
Holland Spring
Antelope Spring
ANTELOPE POINT VABM 8249
Middle Fork
Cabin Creek
Carmichael Fork
Carpenter Draw
Ditch Reservoir
South Fork Reservoir
North Fork Bull Creek
Green Mountain BM 9609
McMichael Draw
Dallas Creek
Bear Paw Fork
Kettle Creek
Steep Creek
Elkhorn Creek
Cottonwood Creek
Moosehorn Creek
Two Water Creek
Falls Creek
Turpin Creek
West Fork Horsetail Creek
Atherton Creek
ATHERTON CREEK
SLIDE
SLIDE AZ MK
KELLY
Red Hills
Lavender Hills
Slate Creek
Fork
SNAKE RIVER
PHONE LINE
OVERLOOK


Grassy Lake Reservoir
Tillery Lake
Cascades Creek
Glade Creek
FLAGG VABM 7318
135
RECLAMATION ROAD
Glade
Hechtman Creek
MOUNT BERRY 8951
Hechtman Lake
Berry Creek
Forellen Peak 9776
Elk Ridge
Harem Hill
PATROL CABIN
GRAND
Owl Creek
BUSTER POINT
OWL 10,611
Webb Canyon
Moose Basin
Colter Canyon
TETON
Doane Peak
MOOSE 11,354
Waterfalls Canyon
Talus Lake
Eagles Rest Peak 11,257
Rolling Thunder Mountain 10,902
Snowshoe Canyon
Hanging Lake
North Moran Bay
PATROL CABIN
Bivouac Peak
Moran Bay
Moran
NATIONAL
Mt Moran 12,694
Thor Peak 12,018
Cirque Lake
Trapper Lake
Bearpaw Lake
PATROL CABIN
Mystic Isle
SPALDING BAY
Spalding
Canyon
HUCKLEBERRY HOT SPRINGS
Polecat Creek
021
135
FLAGG RANCH RESORT
SNAKE RIVER
026
Huckleberry Ridge
North Fork Rodent Creek
HUCKLEBERRY VABM 9615
HUCKLEBERRY F. S. RADIO REPEATER
Sheffield Creek
SNAKE RIVER
Dime Creek
Nickel Creek
Steamboat Mountain
029
030
032
Brown's Meadows
Arizona Creek
028
TRAIL
Wildcat Ridge
Wildcat Peak
PARK
Bailey Meadows
Bailey Creek
Lizard Creek
89
287
17
16
13
1
15
14
12
11
2
LIZARD POINT
PATROL CABIN
Mt. Reid
ARIZONA VABM 7858
Arizona Creek
Bailey Creek
003
Arizona Lake
KITTEN VABM 9177
035
Pilgrim Creek
RANCH
Pilgrim Mountain VABM 8270
East
Cow Island
Pelican Bay
JACKSON LAKE
PARK
COLTER BAY
Colter Bay
Little Mackinaw Bay
Swan Lake
Two Ocean
Emma Matilda La
Half Moon Bay
North Bar Bay
Dollar Island
Elk Island
Hermitage Point
JACKSON LAKE LODGE
JACKSON LAKE DAM
Lozier Hill 7672
Buffalo Meadows
South Bar
Donoho Point
SIGNAL MTN ROAD
Signal Mountain VABM 7731
Marie Island
Deadman Point
SIGNAL MTN LODGE
South Landing
Cow Lake
PARALLEL


GRANITE CREEK
Hot Springs
Granite Falls
GIRL SCOUT CAMP
JACK PINE SUMMER HOME AREA
SOUTH ZONE
Palmer Peak 11,400
Triangle Peak 11,525
Doubletop Peak 11,750
Hodges Peak 11,130
Tosi Creek Basin
Tosi Peak 11,370
Tepee
Brewster Lake
Tin Can Park
Cream Puff Peak
TETON COUNTY
SUBLETTE COUNTY
SHOAL CREEK
DELL CREEK
HOBACK
Hoback
Battle Mountain
KOZY
Game Hill 7950
Canyon
HOBACK RIVER
JACK CREEK
RANCH
Ramshorn Peak 10,292
HOBACK
BONDURANT
Bondurant
RANCH
Fortress Hill
NORTH FISHERMAN
MONUMENT RIDGE
Clark Butte
Clause Peak 10,579
Nutting Draw
Pass Peak 9910
Twin Creek Basin
Granite Creek
Little Rough Creek
Granite Hollow Cr
Bull Creek
Bear Creek
Cow Creek
Jack Pine Creek
Shoal Creek
Deer Creek
West Dell Creek
Ridge Draw
Parody Creek
Mill Creek
Elbow Draw
Jack Creek Spring
Porcupine Creek
Jack Creek Basin
North Fork Fisherman Cr
Garden Creek
Riling Draw
Wertz Draw
Little Cliff Creek
Cliff Creek
Gibbs Creek
Burnt Creek
Miller Draw
Clause Creek
Sandy Creek
Marshall Creek
Clark Draw
Snag Creek
Cabin Cr
Jenny Creek
Fisherman Creek
Raspberry Fork
North Fork
Sandy Creek
South Fisherman Creek
Sled Creek
Sour Moose Creek
Rimdraw Creek
Rim Creek
East Cr
Placer Cr
Parker Cr
Lime Creek
Red Creek
Buck Creek
Kerr Creek
Lake Peak
8M 10,435
Swift Creek
Shoal Fork
Dell Creek
Jack Creek
Tosi
Dell Draw
Dell Ridge
Dell Creek
Dell Draw
Dell Creek
Dell Creek
Dell Creek

TETON NATIONAL FOREST

MOUNTAIN PINE BEETLE POST-TREATMENT SURVEY

FALL 1967

Lodgepole pine stands infested with the mountain pine beetle, which were treated during F. Y. 1967, were surveyed during October and November of 1967. In addition, 21,107 acres of stands not treated were surveyed during this period. A total of 40,965 acres were surveyed, indicating a total of 33,192 trees (See survey summary).

This survey did not include any areas within the Teton Wilderness or Grand Teton National Park.

The method of survey varied. On areas treated during F. Y. 1967 a five percent survey was conducted by contracting. This consisted of taking 1/5 acre circular plots five chains apart on cruise lines spaced eight chains apart and parallel. On the remaining areas, a one percent survey was conducted by force account crews by running 1/4 chain strips spaced 20 chains apart and parallel. The South Teton was surveyed by reconnaissance. All survey work was checked as follows:

a. Contract survey = 60%
b. Force account survey = 10%
c. Reconnaissance = no checking

The total cost of the survey was $13,006.42. (See financial summary.)

Infestation acreages were determined by delineating the areas on two inch planimetric maps and dot counting with a 64 dot per square inch grid.

A statistical analysis was made of the surveyed areas to determine the weighted mean, the variance of the mean, and the co-efficient of variation. Individual survey lines were the sampling units, which were weighted by the number of plots converted to acres. The number of infested trees was determined statistically.

This was the second year for contract surveying, and it is felt that a good job was done with a minimum of project personnel The contracts were all completed within two weeks, allowing good utilization of manpower in completing the total survey (See Survey Organization Chart). The total field manpower for all survey work was 12, including the Project Leader.

Safety was given high priority with no accidents occurring during the survey.

Prepared by: G. Lynn Sprague Date: 11/15/67

SURVEY SUMMARY

CONTRACT SURVEY

UNIT	ACRES SURVEYED	INFESTED TREES	TREES PER ACRE	PER CENT SURVEYED
ROSIE'S RIDGE				
a. Units 21 & 22	852	350	.41	5.05
b. Units 23 - 26	749	1,500	2.00	6.76
c. Units 27 - 32	2,175	970	.45	11.00
d. Units 33 - 37	1,908	5,500	2.88	6.95
e. Units 37 - 48	1,024	2,200	2.15	6.58
HATCHET				
a. Unit 1	3,475	900	.26	4.95
b. Unit 2	1,560	16	.01	5.28
c. Unit 3	1,040	146	.14	4.92
d. Units 4 & 8	1,183	1,000	.84	5.49
e. Unit 5	864	500	.58	5.90
f. Units 6 & 7	1,447	1,500	1.04	5.11
g. Units 9 & 10	1,406	250	.18	4.98
TURPIN CREEK	2,175	500	.23	4.99
TOTALS	19,858	15,332		

FORCE ACCOUNT SURVEY

UNIT	ACRES SURVEYED	INFESTED TREES	TREES PER ACRE	PER CENT SURVEYED
Spread Creek (Unit 20)	1,637	2,200	1.34	3.24
Spread Creek (Units 18, 19, & 49)	5,350	5,000	.93	1.17
Antelope - Ditch Creek (Units 50, 51, 52, 53, & 54)	13,875	10,500	.76	.93
Lower Slide Lake (Unit 56)	245	160	.65	1.20
TOTAL	21,107	17,860		
GRAND TOTAL	40,965	33,192		

RECONNAISSANCE (SOUTH ZONE)

UNIT	ACRES SURVEYED	INFESTED TREES	TREES PER ACRE	
N. Fork of Fisherman	1,000			
Jack Creek	650			
Dell Creek	2,410	40,000	6.4	RECON
Shoal Creek	1,200			
Granite Creek	1,000			
TOTAL	6,260			

FINANCIAL SUMMARY

CONTRACT SURVEY

Contracts:

L. L. Rudd	6,708 acres @ $.38	$2,549.04
Bill Scott	2,175 acres @ $.39	848.25
Fred Stephens	10,975 acres @ $.39	4,280.25
	19,858	$7,677.54
Salaries		2,714.17
Mileage		231.15
Supplies and miscellaneous		362.74
TOTAL		$10,985.60

FORCE ACCOUNT SURVEY

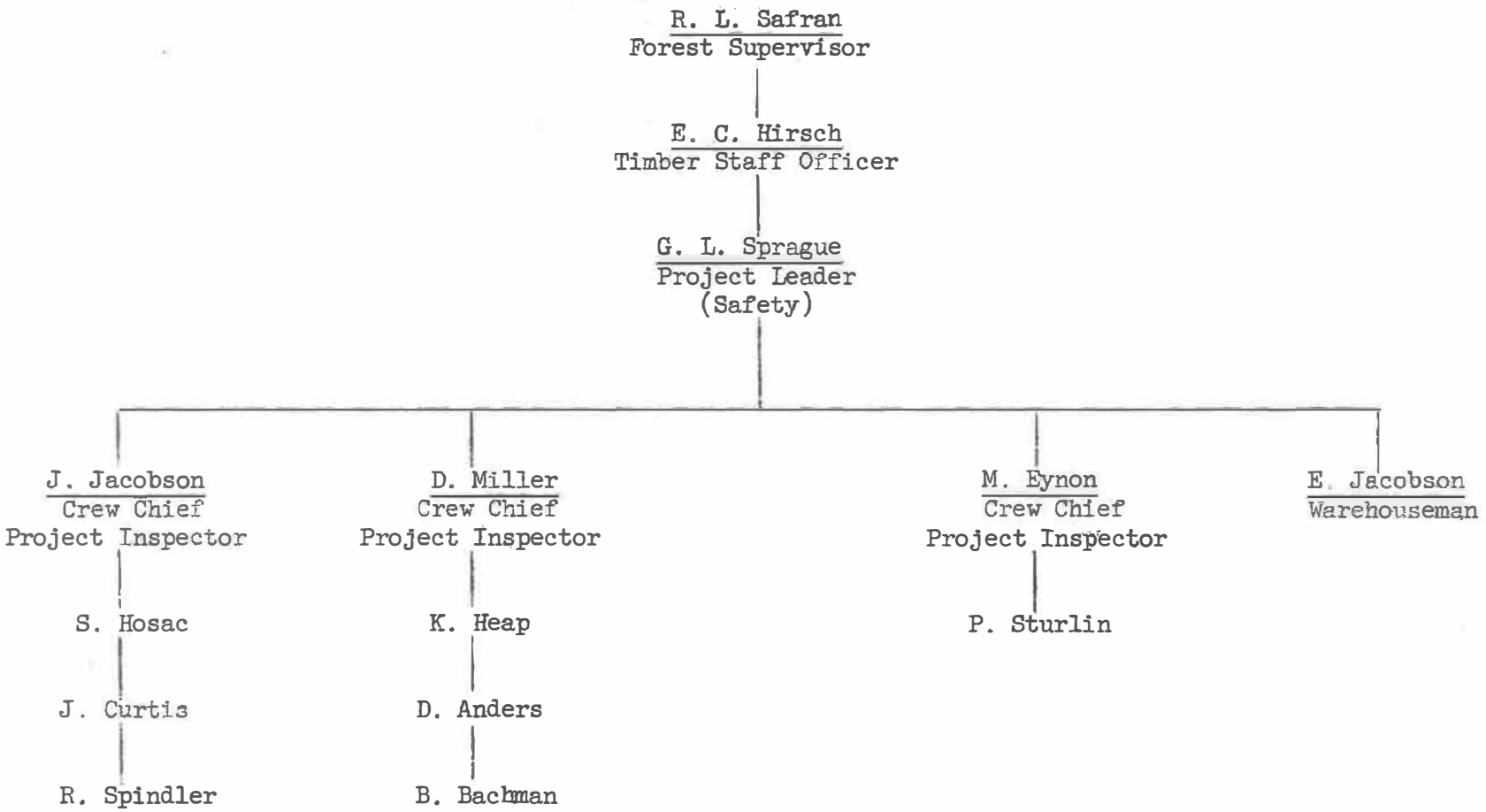
Salaries	$1,767.96
Mileage	133.30
Supplies and miscellaneous	2.56
TOTAL	$1,903.82

HOBACK BASIN RECONNAISSANCE

Salaries	$85.36
Mileage	31.64
TOTAL	$117.00

GRAND TOTAL $13,006.42

Contract Survey: $10,985.60 ÷ 19,858 acres = $.55/acre
Force Account Survey: $1,903.82 ÷ 40,965 acres = $.05/acre
Hoback Reconnaissance: $117.00 ÷ 6,260 acres = $.02/acre


R. L. Safran
Forest Supervisor
E. C. Hirsch
Timber Staff Officer
G. L. Sprague
Project Leader
(Safety)
J. Jacobson
Crew Chief
Project Inspector
S. Hosac
J. Curtis
R. Spindler
D. Miller
Crew Chief
Project Inspector
K. Heap
D. Anders
B. Bachman
M. Eynon
Crew Chief
Project Inspector
P. Sturlin
E. Jacobson
Warehouseman